SPECIAL ISSUE

CONTENTS

Introduction
J. Schouenborg, O. Kiehn (Sweden) vii

Integration of synaptic and intrinsic dendritic currents in cat spinal motoneurons
M.D. Binder (USA) 1

Metabotropic glutamate receptors provide intrinsic modulation of the lamprey locomotor network
A. El Manira, P. Kettunen, D. Hess, P. Krieger (Sweden) 9

Spinal interneurones; how can studies in animals contribute to the understanding of spinal interneuronal systems in man?
E. Jankowska, I. Hammar (Sweden) 19

The whole body receptive field of dorsal horn multireceptive neurones
D. Le Bars (France) 29

Activity of medullary serotonergic neurons in freely moving animals
B.L. Jacobs, F.J. Martín-Cora, C.A. Fornal (USA) 45

Roles of primate spinal interneurons in preparation and execution of voluntary hand movement
E.E. Fetz, S.I. Perlmutter, Y. Prut, K. Seki, S. Votaw (USA) 53

Coordination and localization in spinal motor systems
M.C. Tresch, P. Saltiel, A. d'Avella, E. Bizzi (USA) 66

Modular organisation and spinal somatosensory imprinting
J. Schouenborg (Sweden) 80

Cellular bases of a vertebrate locomotor system – steering, intersegmental and segmental co-ordination and sensory control
S. Grillner, P. Wallén (Sweden) 92

Organization of left–right coordination in the mammalian locomotor network
S.J.B. Butt, J.M. Lebret, O. Kiehn (Sweden) 107

Development of posture and locomotion: an interplay of endogenously generated activities and neurotrophic actions by descending pathways
L. Vinay, F. Brocard, F. Clarac, J.-C. Norreel, E. Pearlstein, J.-F. Pflieger (France) 118

Fast inhibitory synapses: targets for neuromodulation and development of vertebrate motor behaviour
K.T. Sillar, D.L. McLean, H. Fischer, S.D. Merrywest (UK) 130

Locomotor-like activity generated by the neonatal mouse spinal cord
A. Bonnot, P.J. Whelan, G.Z. Mentis, M.J. O'Donovan (USA) 141

Spinal reflexes provide motor error signals to cerebellar modules—relevance for motor coordination
M. Garwicz (Sweden) 152

Encoding and decoding of reticulospinal commands
T.G. Deliagina, P.V. Zelenin, G.N. Orlovsky (Sweden) 166

Contributions of the motor cortex to the control of the hindlimbs during locomotion in the cat
T. Drew, W. Jiang, W. Widajewicz (Canada, USA) 178

Motoneuronal drive during human walking
J. Bo Nielsen (Denmark) 192

Long-term potentiation in spinothalamic neurons
W.D. Willis (USA) 202

Role of kainate receptors in nociception
R. Ruscheweyh, J. Sandkühler (Austria) 215

Spinal plasticity mediated by postsynaptic L-type Ca^{2+} channels
J.-F. Perrier, A. Alaburda, J. Hounsgaard (Denmark) 223

Diversity of neurotrophin action in the postnatal spinal cord
L.M. Mendell, V.L. Arvanian (USA) 230

BDNF: a neuromodulator in nociceptive pathways?
S. Pezet, M. Malcangio, S.B. McMahon (UK) 240

Pain and rehabilitation after spinal cord injury: the case of sensory spasticity?
B.H. Sjölund (Sweden) 250

Recovery of locomotion in the cat following spinal cord lesions
S. Rossignol, L. Bouyer, D. Barthélemy, C. Langlet, H. Leblond (Canada) 257

Using robotics to teach the spinal cord to walk
R.D. de Leon, M.D. Kubasak, P.E. Phelps, W.K. Timoszyk, D.J. Reinkensmeyer, R.R. Roy, V.R. Edgerton (USA) 267

The effect of locomotor training combined with functional electrical stimulation in chronic spinal cord injured subjects: walking and reflex studies
H. Barbeau, M. Ladouceur, M.M. Mirbagheri, R.E. Kearney (Canada) 274

Transplantation of genetically modified cells contributes to repair and recovery from spinal injury
M. Murray, D. Kim, Y. Liu, C. Tobias, A. Tessler, I. Fischer (USA) 292

Strategies for repair of the deafferented spinal cord
H. Aldskogius, E.N. Kozlova (Sweden) 301

PII: S0165-0173(02)00251-5

Properties of motoneurons underlying their regenerative capacity after axon lesions in the ventral funiculus or at the surface of the spinal cord
S. Cullheim, W. Wallquist, H. Hammarberg, H. Lindå, F. Piehl, T. Carlstedt, M. Risling (Sweden, UK) 309
Changes in mRNA content of developing opossum spinal cord at stages when regeneration can and cannot occur after injury
M. Mladinic, M. Wintzer (Italy) 317
How do transplanted olfactory ensheathing cells restore function?
N. Keyvan-Fouladi, Y. Li, G. Raisman (UK) 325

Author Index 328